

## Electronic Acknowledgement Receipt

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<b>Application Number:</b>	10616659
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	9959
<b>Title of Invention:</b>	Method for determining gene knockouts
<b>First Named Inventor/Applicant Name:</b>	Costas D. Maranas
<b>Customer Number:</b>	27407
<b>Filer:</b>	John Darrell Goodhue/Patricia E. Wilson
<b>Filer Authorized By:</b>	John Darrell Goodhue
<b>Attorney Docket Number:</b>	P06367US03
<b>Receipt Date:</b>	02-FEB-2010
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<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	NPL Documents	Mushegian_A-minimal-gene-set_Proc-Natl-Acad-Sci_1996.pdf	2576878 3ec6a3f9c8b24f8e0b6eaa92df8ec3a16f5b7d1	no	6

### Warnings:

### Information:

2	NPL Documents	Nakamura_Metabolic-engineering_CurrOpinBiotechnol_2003.pdf	1666231	no	6
			61913a85681a2a3113839d23eb5c31fc3cd10368		
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3	NPL Documents	OhAndLiao_Gene_Expression_BiotechProg2000.pdf	4632418	no	9
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4	NPL Documents	Overbeek_WIT_NucleicAcidsReviews_2000.pdf	646525	no	3
			fdb7eacb67025a6e1670a66b1cd8225195de7bb6		
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Information:					
5	NPL Documents	Palsson_Challenges_NatBiotechnol2000.pdf	1014750	no	4
			2f6282f20f5827f8c58390b26d1cdc71f17543cf		
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Information:					
6	NPL Documents	73-B-Papoutsakis_Equations-and-calculations-of-product-yield_1985.pdf	4256170	no	17
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Information:					
7	NPL Documents	73-A-PapoutsakisEquations-and-calculations-for-fermentations.pdf	3921079	no	14
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8	NPL Documents	74-A-Pennisi_Laboratory-Workhorse-Decoded_Science_1997.pdf	486567	no	3
			4e8aa0d366e6e8590b567cbe4734ccfa599f8f76		
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9	NPL Documents	Pharkya_Exploring_Overproduction_BiotechnolBioeng2003.pdf	3987127	no	13
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10	NPL Documents	Pharka_OptStrain_GenomeRes2004.pdf	2625170	no	11
			95ea426562e41bed652dc7b698f7f7dc49e901ab6		
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11	NPL Documents	Pramanik_Stoichiometric-Model-of-Escherichia-coli.pdf	1752158	no	24
			f12a88ab3479790b20880918b9ebcf77c08fb777		
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12	NPL Documents	76-Quakenbush_The-power-of-public-access_Nat-Genet_2001.pdf	736923	no	3
			9d775812205a0fe0c0891513c526fff03043180e		
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13	NPL Documents	79-Reed_An-Expanded-Genome-scale_GenomeBiol2003.pdf	2490891	no	12
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14	NPL Documents	80-Richmond_Genome-wide-expression_Nucl-Acids-Res_1999.pdf	3495292	no	15
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			7346959df8c788a8120e7076c08d79b74522ea49		
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16	NPL Documents	Savageau_Biochemical_Systems_1969_.pdf	1785565	no	10
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17	NPL Documents	Schilling_The-Underlying-Pathway-Structure.pdf	3298170	no	6
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18	NPL Documents	85-Schilling_Combining-pathway-analysis_BiotechnolBioeng_2000-2001.pdf	1875192	no	21
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19	NPL Documents	84-Schilling_Toward-metabolic-phenomics_BiotechnolProg_1999.pdf	805678	no	8
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20	NPL Documents	87-Segre_From-annotated-genomes_OMICS_2003.pdf	3578689	no	16
			68e3c984d74182556de32c8280e136f26f449573		
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21	NPL Documents	88-Selkov_MPW_NucleicAcidsRes_1998.pdf	744683	no	3
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22	NPL Documents	Sun_Modeling_DNA_AnnConfCompMolBiol1998.pdf	3631721	no	37
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25	NPL Documents	Tomita_E_CELL_Software_Bioinformatics1999.pdf	2633120	no	13
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26	NPL Documents	Tomita_The_ECellProject_NewGenComput2000.pdf	3066204	no	10
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27	NPL Documents	Torres_Indirect_Optimization_BiotechnolBioeng1997.pdf	4527877	no	15
			71b73a0b0df30880504fa8b873fe02b8db31313e		
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28	NPL Documents	Valdes_Metabolic-reconstruction-of-sulfur_BMC-Genomics_2003.pdf	3503492	no	16
			8e31554019ddb172e3470ba852bfe0e702bceed2		
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29	NPL Documents	95-A-Vallino_Metabolic-flux-distribution_Biotechnol-Bioeng_1993.pdf	4306784	no	14
			03d72385737248a81929ae08fba67dff934e145a		
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30	NPL Documents	99-A-BW-Varma_Metabolic-Capabilities_PART-I_J-Theor-Biol_1993.pdf	5361128	no	26
			39a48c1bf482a80883ad98cd91839eb00cf308e1		
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31	NPL Documents	102-VarmaAndPalsson_Stoichiometric_flux-balance-models_ApplEnvironMicrobiol_1994.pdf	2295301	no	8
			c06159b93e5d00222a526bfeac7f7ea8762ed8fe		
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32	NPL Documents	104-VarnerAndRamkrishna_Mathematical-Models-of-Metabolic-Pathways_CurrOpinBiotechnol_1999.pdf	494381	no	5
			fda33012d0a2a9fb766fee7b71fd4368c79f04c1		
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33	NPL Documents	105-Voit_Optimization-in-Integrated-Biochemical-Systems_BiotechnolBioeng_1992.pdf	2201330	no	11
			7ad2c4e38ac4dd91503762181293297ca6cf8c92		
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34	NPL Documents	106-Wang_Cadmium-removal-by-a-new-strain_App-Environ-Microbiol_1997.pdf	1099064	no	4
			ddb757e1333bf81db57087bd995e3ec88241b3db		
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35	NPL Documents	111-Xie_Energy-metabolism-and-ATP-balance_Biotechnol-Bioeng_1996.pdf	3117474	no	11
			0a59972264e0587078452d098ce04544bf70a087		
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36	NPL Documents	113-Xie_Integrated-approaches-to-the-design_Trend-Biotechnol_1997.pdf	774685	no	6
			657b456d1080068cafaa66901e3746628473da12		
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37	NPL Documents	112-Xie_Material-Balance-Stud-II_Biotechnol-Bioeng_1996.pdf	3842777	no	12
			9fcb3a58ef02bd7efaa653e7beebd3a854aed1c2		
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38	NPL Documents	108-Xie_Stoichiometric-analysis-of-animal-cell-growth_Biotechnol-Bioeng_1994.pdf	3238708	no	11
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39	NPL Documents	Yang_Metabolic_Flux_MetEng_1999.pdf	1606906	no	9
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41	NPL Documents	url_ilog_products_cplex_GAMS_Brooke1998.pdf	12460628	no	276
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Total Files Size (in bytes):			109886614		

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**New Applications Under 35 U.S.C. 111**

**If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.**

**National Stage of an International Application under 35 U.S.C. 371**

**If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.**

**New International Application Filed with the USPTO as a Receiving Office**

**If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.**